HEWLETT PACKARD

9895A
Flexible Disc Memory

*TECHNICAL DATA JULY 1980

The Hewlett-Packard 9895A Flexible Disc Memory provides up to 2.36 million bytes of mass storage capacity. Each of the two drives in the 9895 reads and writes double-sided, double-density format on HP qualified flexible discs. The 9895 can store up to 590,000 bytes of data per disc side for a total of 1.18 million bytes of storage per disc.

Featuring the HP-IB** interface, the 9895 is compatible with the HP System 35 and 45, 9825 T and HP 85 Desktop Computers and the Series HP 1000 Mini-Computers.

The 9895's built-in controller can recognize if the flexible disc has been recorded on one or two sides. This capability enables the 9895 to read single-sided discs written by the HP 9885M or HP 9885S Flexible Disc Memories. The controller of the 9895 also allows it to exchange data with other systems which use the IBM 3740 single-sided, single-density format provided additional software exists on the host computer. (Note: Since tolerances on IBM compatible media are not fully specified by vendors and do vary, HP cannot guarantee that IBM 3740 media can be read by the 9895 in every case.)

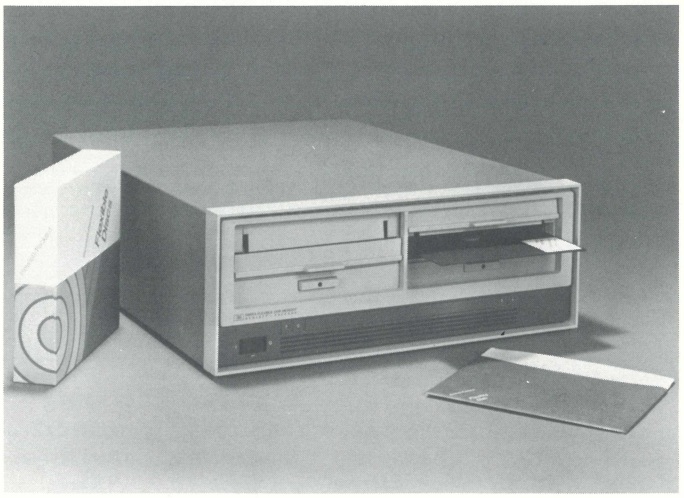
The 9895 can provide up to 4.72 million bytes storage capacity through an optional dual-drive slave unit (without controller). This option is one of several available designed to give the user price/performance flexibility. An optional single drive slave offers an extra 1.18 million bytes storage, and the dual-drive slave provides an additional 2.36 million bytes. The 9895 can also be ordered with one drive installed for 1.18 million bytes capacity. These options can be easily upgraded to 9895 full capability at a later date if the user so desires.

HP provides the user a convenient source of approved, quality media through extensive testing, selection and control. These HP qualified flexible discs bring out the most reliable performance in the 9895 disc drive.

System Requirements

The 9895 is supported on a wide range of HP desktop and mini-computers. Current systems that have developed drivers for accessing the 9895 in HP mainframes are:

HP System	ROM/Driver	Interface
HP 85A	00085-15001	82937A
9825T	98228A	98034A
9835A/B	98331B	98034A☆
9845B/C	98413A	98034A☆
HP 1000-10	DD • 30	12009A
HP 1000-20,40,45	DVA 32	12821A



System Software

Typical functions that can be provided by a host controller using the 9895 command set are:

- Create a data file with a specific number of records and assign it a name.
- Store either program segments or an entire program in a specified file.
- Load a program from the disc.
- Erase a file from the disc and then add the file space to an availability table.
- List information about every user file on the disc.
- Duplicate the contents of one file into another file or drive.
- Print data into a file from the beginning of a specified record.
- Read data from a file starting after the last item printed or read.
- Read data from file starting at a specified record.

In addition to these functions, the extensive self-test capabilities of the 9895 are accessible to the host controller. A hardware self-test is initiated and reported on the HP-IB at powerup. Read/write tests can be initiated manually by the operator or remotely via the HP-IB utilizing a host computer.

** Hewlett-Packard Interface Bus: Not just IEEE-488, but the hardware, documentation and support that delivers the shortest path to a computer system.

☆ The 9835A/B and 9845B/C requires a dedicated HP-IB channel (98034A) for mass storage devices.

Specifications

TECHNICAL

Rotation Speed ..... 360 rpm ± 3.5%
Average Access Time ..... 179 ms

HP DOUBLE DENSITY FORMAT

Recording Format ..... double-density (M^2FM)
Tracks per Surface 77
Recording Surfaces per Disc 2
Bytes per Sector 256
Sectors per Track 30
Maximum Transfer Rate ‡
(Buffered, interleave of 2) ..... 25 600 bytes/s
Max Formatted Storage † ..... 2 365 440 bytes (2 drive unit)
1 182 720 bytes (1 drive unit)

POWER REQUIREMENTS

Source (±10%) ..... 100 Vac
120 Vac
220 Vac
240 Vac
Line Frequency (±2%) ..... 50Hz or 60Hz

LINE REQUIREMENTS (MAX.)

	9895A	9895A Opt. 010 Single Drive	9895A Opt. 011 Single Drive Slave	9895A Opt. 012 Dual Drive Slave
100 Vac	1.9A	1.3A	1.0A	1.6A
120 Vac	1.6A	1.1A	0.8A	1.4A
220 Vac	0.9A	0.6A	0.5A	0.8A
240 Vac	0.8A	0.5A	0.4A	0.7A

SIZE/WEIGHT

Height ..... 192mm (7.6 in.)
Depth ..... 575mm (22.6 in.)
Width ..... 483mm (19.0 in.)
Net Weight (9895A) ..... 26.8kg (59 lbs)
(9895 Opt. 010) ..... 20.9 kg (46 lbs)
Shipping Weight (9895A) ..... 31.8 kg (70 lbs)
(9895 Opt. 010) ..... 25.9 kg (57 lbs)

ENVIRONMENTAL RANGE

Operating Temperature
(ambient) ..... 10° C to 40° C (50° F to 104° F)
Storage Temperature ..... −40° C to 60° C (−40° F to 140° F)
Relative Humidity ..... 20% to 80% (25.5° C max. wet bulb temp.)
Power Consumption (max) 180W
Recommended Attitude ..... Horizontal

‡ This is a maximum number. Transfer rate may vary depending on host computer.

† This is a maximum number. The host system may utilize a small portion of this storage as overhead.

Ordering Information

Dual Drive with control board 9895A
Single Drive with control board ..... 9895A Opt. 010
Single Drive Slave, no control board ... 9895A Opt. 011
Dual Drive Slave, no control board .... 9895A Opt. 012
50Hz Line Frequency ..... Opt. 001
Rack Mount ..... Opt. 002

(For mounting in HP rack systems also order 30" racking support rails — 12679B)

Accessories Supplied

Item	HP Part No.
Power Cord (1)	depends on origin of sale
Users Manual (1)	09895-90000
Flexible Disc (2) (1 ea - 9895A Opt. 010, 011)	see accessories available
Disc Protector Card (2) (1 ea - 9895A Opt. 010, 011)	09895-90010

Accessories Available

Item	HP Part No.
HP-IB Interface Cable 2 m (1)	8120-2718
Drive Accessory (to upgrade a 1 drive unit to a 2 drive unit) 60Hz ††	98952A
Drive Accessory (to upgrade a 1 drive unit to a 2 drive unit) 50Hz ††	98952A Opt. 001
Control Board Assembly (to upgrade slave to standard) ††	98951A
Rack Mount Kit	09895-88022

(For mounting in HP rack systems also order 30" racking support rails — 12679B)

Slave Cable/1 meter (supplied with Opt. 011, Opt. 012)	09895-61606
Disc Kit containing 10 double-sided, double-density flexible disc	92195A

Purchase Plans

Contact one of the Hewlett-Packard worldwide sales and service offices for specific prices and plans in your area.

Maintenance Agreements

Maintenance agreements are available for all desktop computer products. Current U.S. rates are found in the Maintenance Service and Prices Microfiche, No. 5952-2432D. These agreements represent HP's best level of support. Major advantages to the customer include: fixed annual cost, priority service response, on-site service, regular maintenance, individualized contracts.

†† In order to insure proper operating performance, these kits should be installed by a Hewlett-Packard Customer Engineer. For installation by HP specify Opt. 101.

*Data subject to change

For assistance call the HP regional office nearest you: Eastern 301/258-2000, Midwest 312/255-9800, Southern 404/955-1500, Western 213/877-1282, Canadian 416/678-9430. Or write to Hewlett-Packard, 3404 East Harmony Road, Fort Collins, Colorado 80525; in Europe, Hewlett-Packard GmbH, Desktop Computer Division, Herrenberger Strasse 110, D-703 Boeblingen, Postfach 1430, West Germany; elsewhere in the world, Hewlett-Packard Intercontinental, 3495 Deer Creek Road, Palo Alto, California 94304.

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